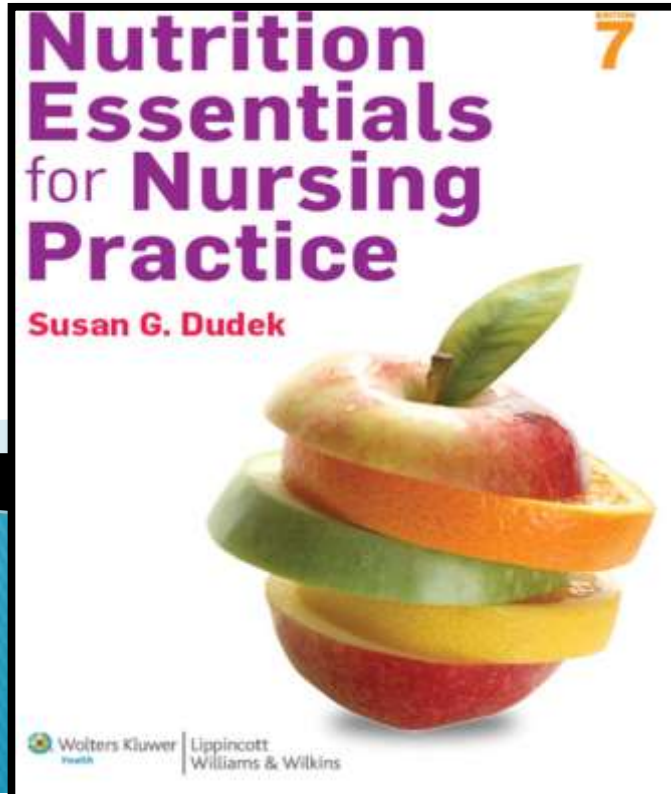
Nutrition in Nursing



Nutrition

- Is interaction between an organism and the food it consume
- Is the study of the organic process by which human uses food and liquids for normal functioning, growth and maintenance and to maintain the balance between health and disease

Food

- Is any substance normally eaten or drunk by living human. The term **food** also includes liquid drinks.
- Food is the main source of energy and of nutrition for human, and is usually of animal or plant origin.
- Food & eating is **a basic need**, affects health

- Is the provision to obtain the essential nutrients necessary to support life and health. In general, people can survive from two to eight weeks without food, depending on stored body fat and muscle mass

Nutrients

- A substance that provides nourishment essential for the maintenance of life and for growth
- Six nutrient groups exist, classifiable as those that provide energy and as those that otherwise support metabolic processes in the body: as

1. *Macronutrients – Essential (carbohydrates, fats, fiber, proteins, and water)*
2. *Micronutrients – Regulatory (minerals and vitamins)*

- substances used by the body for growth & development
- Role of nurse to teach, guide and inform on the importance of proper nutrition

Nutritional status

- The state of balance between nutrient supply (intake) and demand (requirement)
- Imbalance between intake and requirement can result in Malnutrition

(over-nutrition or under-nutrition)

- The dietitian is the nutrition and food expert, nurses play a vital role in nutrition care. Nurses may be responsible for screening hospitalized patients to determine the existing level of risk. They often serve as the link between the dietitian and physician,

Malnutrition is a major contributor to morbidity, mortality, impaired quality of life, and prolonged hospital stays

NUTRITION SCREENING

- is a quick look at a few variables associated with nutrition problems to determine if individuals are malnourished or are at risk for malnutrition

Nutritional Assessment

- An in-depth analysis of a person's nutritional status. In the clinical setting, nutritional assessments focus on moderate- to high-risk patients with suspected or confirmed protein-energy malnutrition.

- **BMI** and some or all of the components of a **subjective global assessment** are commonly used to assess nutrition

- Nutritional assessment is more accurately called the nutritional care process that includes four steps: assessment, nutritional diagnosis, implementation, and monitoring and evaluation. While nurses use the same problem-solving model to develop nursing or multidisciplinary care plans

- the nutritional plan of care devised by dietitians is specific for nutrition problems that dietetics professionals are responsible for treating independently.

CRITERIA INCLUDED IN SUBJECTIVE GLOBAL ASSESSMENT

- **Weight Change:** Unintentional weight loss and the time period of loss
- **Dietary Intake:** Change from normal, duration, type of diet consumed
- **Gastrointestinal Symptoms Lasting Longer than 2 Weeks:** Nausea, vomiting, diarrhea, anorexia
- **Functional Capacity:** Normal or suboptimal; ambulatory or bedridden
- **Disease and Its Relation to Nutritional Requirements:** Primary diagnosis; severity of metabolic stress
- **Physical Signs and Severity of Findings:** Loss of subcutaneous fat (triceps, chest), muscle wasting (quadriceps, deltoids), ankle edema, sacral edema, ascites

Assessment

- Assessment data can be classified as ABCD:
- A- anthropometric.
- B- biochemical test.
- C- clinical testing.
- D- dietary data.

- A client's medical-psychosocial history is also evaluated for its impact on nutritional status.

Anthropometric Data

- Anthropometric measurements are physical measurements of the body, most commonly, **height** and **weight.** Measuring height and weight is relatively quick and easy and requires little skill
  therefore, *measures* not *estimates* should be used whenever possible to ensure accuracy and reliability.

Body Mass Index

- an index of weight in relation to height that is calculated mathematically by dividing weight in kilograms by the square of height in meters.
- After height and weight are obtained, weight can be evaluated

- BMI = weight in kg/ (height in metre)^2

- Body mass index (BMI)

1. <18.5 _____underweight
2. 18.5 – 24.9 _____healthy weight
3. 25 – 29.9 _____overweight
4. 30 – 34.9 _____obesity class 1
5. 35 – 39.9 _____obesity class 2
6. ≥40 _____obesity class 3

Percentage of "ideal" body weight (% IBW)

First calculate IBW using the Hamwi method.

- **For women:**

Allow 100 pounds for the first 5 ft of height, and add 5 pounds for each additional in. **100 + 5 lb for every inch over 60 in**

- **For men:**

Allow 106 pounds for the first 5 ft of height, and add 6 pounds for each additional in. **106 + 6 lb for every inch over 60 in**

- Add 10% if person has large frame, subtract 10% if person has small frame. If frame size is unavailable, assume medium.
- Then calculate % IBW.

$$\% \text{ IBW} = \frac{\text{current weight}}{\text{IBW}} \times 100$$

0.39 X cm = in
in X in = cm
Foot = 12 in
Kg X 2.2 = pound
Pound / 2.2 = kg

Evaluating Weight

Percentage of “ideal” body weight (% IBW)

1. 69% severe malnutrition
2. 70%–79% moderate malnutrition
3. 80%–89% mild malnutrition
4. 90%–110% within normal range
5. 110%–119% overweight
6. 120% obese
7. 200% morbidly obese

Biochemical Data

- Blood and urine tests can measure a variety of proteins and components that *may* reflect nutrition status; however, there is no single test that is both sensitive and specific for protein-calorie malnutrition. Disease, treatments, hydration, pregnancy, or exercise can profoundly alter lab values. However, combined with other assessment information, biochemical data may help support the diagnosis of a nutritional problem.

Physical signs and symptoms suggestive of malnutrition

- Swollen glands of the neck and cheeks
- Dry, rough, or spotty skin that may have a sandpaper feel.
- Poor or delayed wound healing or sores.
- Thin appearance with lack of subcutaneous fat
- Muscle wasting (decreased size and strength)
- Edema of the lower extremities

Continue ….

- Weakened hand grasp.
- Depressed mood.
- Abnormal heart rate, heart rhythm, or blood pressure.
- Enlarged liver or spleen.
- Loss of balance and coordination.

Clinical Data

- Clinical data refer to physical signs and symptoms of malnutrition observed in the client. The problem with relying on physical appearance to reveal nutritional problems is that most signs cannot be considered diagnostic; rather, they must be viewed as suggestive of malnutrition because evaluation of “normal” versus “abnormal” findings is subjective, and the signs of malnutrition may be nonspecific.

- For instance, dull, dry hair may be related to severe protein deficiency or to overexposure to the sun. In addition, physical signs and symptoms of malnutrition can vary in intensity among population groups because of genetic and environmental differences.

Dietary Data

- Although the nurse may only be required to fill in a blank space next to the word “diet,” simply asking the client “Are you on a diet?” will probably not give accurate or sufficient information to determine what the client eats

- The client may interpret that leading question as “You should be on a diet. If you're a good patient, you'll tell me you follow a diet.” A better question would be, “Do you avoid any particular foods?” or “Do you watch what you eat in any way?”

Example for nutrition questionnaire

1. Height: _____ Usual Weight: _____ Actual Weight: _____
2. Have you had a recent weight loss of greater than 10 pounds within 30 days?
3. Have you been on a weight reduction diet? _____ yes _____ no
4. Have you had a recent change in appetite? _____ yes _____ no
5. Do you have any problems with: swallowing? _____ yes _____ no
   chewing? _____ yes _____ no
   nausea? _____ yes _____ no
   diarrhea? _____ yes _____ no
   vomiting? _____ yes _____ no
   constipation? _____ yes _____ no
6. Do you follow any special diet? _____ yes _____ no
   If yes, what type of diet? _____
7. What foods are you allergic to?
8. Do you take any vitamin/mineral supplement? _____ yes _____ no
   If yes, please list.
9. Do you take any medications?
   If yes, please list:

	Prescription	*Over-the-counter*

Nursing Diagnosis

- A diagnosis is made after assessment data are interpreted. Nursing diagnoses in hospitals and long-term care facilities provide written documentation of the client's status and serve as a framework for the plan of care that follows. The diagnoses relate directly to nutrition when altered nutrition is the problem or indirectly when a change in intake will help to manage a non-nutritional problem
- Purpose: To identify and label the nutrition problem

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- Nursing related nutrition diagnosis

  NOT medical diagnosis

Examples:

Planning: Client Outcomes

- What are your goals?
- What should you do for your client?
- Outcomes, or goals, should be measurable, attainable, specific, and client centered.

Nursing Interventions

- What can you or others do to effectively and efficiently help the client achieve his or her goals? Interventions may take the form of nutrition therapy and client teaching.

- Nutrition Therapy

eating pattern, food intake, eating style, or the food you eat may

Calculating estimated needs

- Client Teaching

1. Reassure clients who are apprehensive about eating.
2. Encourage a big breakfast if appetite deteriorates throughout the day.
3. Replace meals withheld for diagnostic tests.
4. Promote congregate dining if appropriate.
5. Question diet orders that appear inappropriate.
6. Order snacks and nutritional supplements.
7. Request assistance with feeding or meal setup.
8. Get the patient out of bed to eat if possible.
9. Encourage good oral hygiene.
10. ask for information on food preferences

Monitoring and Evaluation

- Observe intake whenever possible to judge the adequacy.
- Document appetite and take action when the client does not eat.
- Monitor weight.
- Monitor progression of restrictive diets. Clients who are receiving nothing by mouth (NPO), who are restricted to a clear liquid diet, or who are receiving enteral or parenteral nutrition are at risk for nutritional problems.

- **Note**: Documentation is an on-going process that supports all the steps in the Nutrition Care Process

Have a good day